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ABSTRACT

Student mobility is a phenomena that negatively affects performance on tests. In New Jersey this is a problem because test scores on statewide proficiency tests are used as criteria for graduation and as one of the criteria for state certification of the school district. A study done in Perth Amboy was designed to collect data on student mobility and to set guidelines for the standardized collection of such data in the future. Data were gathered from a sample of 315 tenth graders on social, behavioral, familial and performance characteristics. Their attendance records and transfer rates were considered in conjunction with these characteristics. The following factors were found to have a significant effect on the students' performance on the proficiency tests: (1) number of years in the district; (2) behavior; (3) home language; and (4) attendance. Recommendations were the following: (1) entering or re-entering students should be assessed for remediation needs; (2) an assessment or investigation should be done of the alignment of the curriculum with the tests; (3) the district should encourage bilingual families to speak some English at home. (VM)

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STUDENT MOBILITY IN THE PERTH AMBOY SCHOOL DISTRICT AND ITS RELATIONSHIP TO HIGH SCHOOL PROFICIENCY TEST PERFORMANCE

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Background of High School Proficiency Test

All New Jersey high school students are required to pass the High School Proficiency Test (HSPT) to graduate. The test assesses student basic skills in the three content areas of reading, writing, and mathematics. According to New Jersey's high school graduation law, students must receive a passing score on each section to obtain a diploma. Passing scores for the test administrered during the 1986/87 school year were 75 percent correct for reading, 77 for writing, and 61 for math. The test is initially administered in ninth grade; students failing any of the sections have the opportunity to retake those sections in subsequent years (one retest annually). For many students the test has become a major hurdle between them and a diploma and a number of school districts have devoted significant amounts of time, money, and energy to help their students pass the test. In addition, the state has provided both funds and special programs to districts for supplemental compensatory education aimed at those students who fail sections of the HSPT.

The HSPT has yet another purpose, namely as one of several criteria for school district certification. In New Jersey, school districts are recertified every five years. The school district is evaluated for certification based on a number of factors such as school/community relations and the condition of its facilities. Another factor examined is the percent of students in the district that pass the HSPT. If a district has less than 75 percent of its students passing all three sections of the HSPT and fails to meet other criteria established by the state, the district comes under state monitoring and could have its certification rescinded. There are three levels to the monitoring process which may culminate in state takeover of the district. The levels are:

Level I - evaluation of the district by Department of Education staff to determine whether the district satisfies the following ten essential elements: planning, school/community relations, comprehensive curriculum/instruction, student attendance, facilities, professional staff, mandated programs, achievement on statewide testing system and HSPT, equal educational opportunity/affirmative action, and financial.

Level II - remediation of deficiencies in districts that did not pass Level I. This includes analysis of the underlying problem(s), development and implementation of an improvement plan, and re-evaluation to insure that Level I standards have been met.

Level III - appointment of an external review team to address the deficiency(ies) and re-evaluation to insure that Level I standards are achieved. If the district still does not qualify for certification the Comissioner of Education can "take-over" the district by firing the administration and disbanding the board of education, and appointing a new superintendent and operating the district from the state level.

Currently, there are a number of districts in New Jersey at various levels in this monitoring process and, although no districts have been taken over by the state, the monitoring procedure has raised considerable concern in all districts over their HSPT scores, especially urban districts which usually have a larger percentage of low achieving students.

Perth Amboy is one such urban district where the administration is very concerned about the students' HSPT results. Last year the district had 65 percent of its students passing reading, 50 percent passing math and 56 percent passing writing. Only one third of the students passed all three sections. These low scores are of particular concern since only those districts with ninth grade passing rates of at least 60 percent on all three parts of the HSPT are considered to be close enough to the 75 percent standard that they are likely to meet it in three years, the average time districts will be monitored for recertification. Perth Amboy and districts like it that are below the 60 percent mark have been required to meet an

interim standard of at least 60 percent by 1988. Moreover, they must raise their passing rates to 75 percent by they time the come up for recertification. If one of these districts fails to meet the interim standard by 1988 its certification could be rescinded.

So although the process of district certification involves a number of factors besides the HSPT results, scores of this one test have taken on enormous significance for districts such as Perth Amboy because the test scores seem to have become the primary criteria used to determine whether districts will have their certification continued. Thus the HSPT has became a central issue in the certification process as well as a major hurdle for students at-risk of academic failure.

The Problem

There are many factors which effect student performance on tests like the HSPT. One problem which is particularly acute in Perth Amboy is that of student mobility. Perth Ambo, has a highly mobile student population making it extremely difficult for the district to keep track of its students. Many Perth Amboy students transfer into the district from other countries. Others transfer between Perth Amboy and other nearby districts several times a year. Still others transfer among schools in the district. Despite this pattern in Perth Amboy, there is only limited data on the mobility of students: how long they had been in the district or how often they have transferred. It is estimated that approximately a third of the student body in Perth Amboy transfer at least once during their enrollment in the district. In addition, the district is uncertain as to how much of an effect this mobility is having on student performance.

Research for Better Schools (RBS) designed a study to collect data on this problem of mobility and to provide guidelines that would help the

district establish a system for collecting mobility data in the future. The study involved collecting data from a sample of student transcripts and testing a set of hypotheses about the relationship of mobility and other factors to HSPT performance. The purpose of the study was to establish a set of factors, including mobility, related to HSPT performance and to make some judgments about the degree to which the district has control over any of these factors.

The Study

There is one high school in Perth Amboy with a total enrollment of 1,628. The transcripts of current tenth graders (Class of 1989) were selected for the sample since they are the first class required to pass the HSPT in order to graduate. As noted, of particular interest for the study was the students' movements into and out of the district and between schools within the district as well as the effect this mobility might have on their HSPT performance. The following information was taken from the students' transcript files from kindergarten through ninth grade:

- family situation
- language spoken at home
- number of address changes
- number of years in a bilingual program
- attendance data by grade
- transfer data by grade (to and from Perth Amboy)
- number of transfers per year
- behavior data
- performance data (CAT scores, IQ, HSPT)

Using these data five hypotheses were tested with respect to home and school factors that may affect student achievement in school and thus influence student performance on the HSPT.

> H1: The greater the number of consecutive years the student is enrolled in the Perth Amboy school district, the better the student's performance will be on the HSPT.

The student who has continuity of instruction during a school year by remaining in the same classroom and the continuity of being in the same district from year to year should have been exposed to a better learning environment. Consequently, students with stability in the district should perform better on the HSPT.

H2: The higher the student's average attendance the better the student's performance will be on the HSPT.

Students who have good attendance are apt to do better on the test because they are in school more days and potentially are learning more than those with poor attendance.

H3: The better the student's classroom behavior, the better the student's performance will be on the HSPT.

A student's behavior in school also effects how much he or she learns. A student with good behavior spends more time on task and can therefore learn more than a disruptive student.

H4: The student with both parents present in the household will have better performance on the HSPT.

Students' home situations can also effect performance. Students from stable two parent households are usually not preoccupied with domestic problems. Also, in stable households, parents may be present more often to help the child with school problems as well as to monitor homework and the student's performance in school.

H5: The more frequently English is spoken at home, the better the student's performance will be on the HSPT.

Home language also may have an impact on HSPT performance. Since the student's schooling is conducted in English (except in bilingual classes), a student from a family where English is spoken at home is likely to have a better command of the language than someone from a family where English is not spoken.

Background Characteristics

The sample consisted of 315 tenth graders who had taken the HSPT in April 1986. Approximately 70 percent of the students came from a two parent household while 30 percent lived with one parent or other relatives. Data on the language spoken at home was available for over two-thirds of the sample and of that portion, slightly more than a third spoke only Spanish or another foreign language at home, and another third spoke only English at home. The remainder spoke a combination of English and Spanish or English and another language. Student records indicate that 61 percent had no change of address during their residence in Perth Amboy while 19 percent had moved once and an additional 19 percent had moved at least twice. Fifteen percent of the students were enrolled in a bilingual program for at least one year.

Behavior data for each student was taken from a work habit and social development grid on their transcript file (see example below). Data were available for each year students were enrolled in school in the Perth Amboy district. Students were given a rating of either S-satisfactory, I-improvement needed or U-unsatisfactory in 8 categories such as: follows school rules, is cooperative, is courteous, completes work on time, respects property of others, and produces neat careful work.

EXAMPLE

Work Habits & Social Development

(Write in Grade)	K	1	2	3	4	5	6	7	8
Is Self Reliant	S	S	S	S	S	I	S	S	S
Follows School Rules	S	S	I	S	U	S	S	S	U
Is Cooperative	S	S	S	S	S	S	I	S	I

S - Satisfactory I - Improvement Needed U - Unsatisfactory

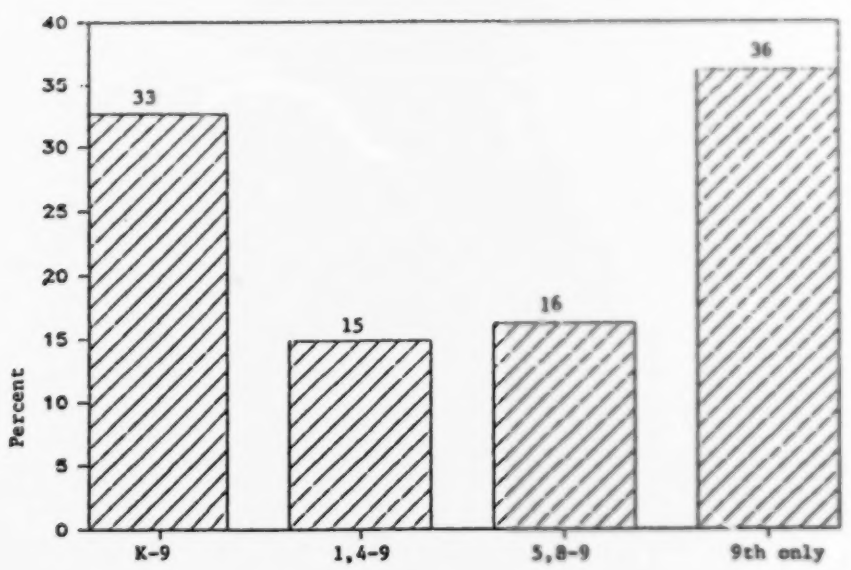
On the average, seven years of behavior data were available for each student. Forty-six percent of the students had zero to two I's and 54 percent had three or more. Sixty-eight percent had no U's while 32 percent had one or more.

Student Mobility

One third of the sample had been enrolled in Perth Amboy schools from K to 9th grade. More than half of this group made no within district transfers, indicating a very stable population. Fifteen percent entered the district during elementary school (between 1st and 4th grade)*, while seventeen percent entered or re-entered during middle school (between 5th and 8th grade). The remaining 36 percent enrolled or re-entered the district in 9th grade (See Table 1). In this latter category, 75 percent of the new 9th grade enrollees were from the parochial school system.

Table 1

Years in Perth Amboy School District
(n=315 students)



*Note: When this category is broken down further the percentages are as follows: 7% entered Perth Amboy in first grade, 1% in second, 3% in third, and 4% entered in fourth grade.

Of the five types of transfers that took place 17 percent of all the transfers occurred within the district. Twelve percent occurred from or to another New Jersey district, usually one adjacent to Perth Amboy; 8 percent of the transfers were from or to another state, 28 percent from or to another country; and 35 percent from or to paraochial schools (see Table 2).

Table 2
Perth Amboy Student Mobility

Type of Transfer	IN	OUT	TOTAL
1) within district	n/a	n/a	17%
2) another public NJ school district	10%	2%	12%
3) another state	6%	2%	8%
4) another country	22%	6%	28%
5) parochial school system	33%	2%	35%

Total Number of Transfers 282

Factors Related to HSPT Performance

Of the five factors hypothesized to be related to HSPT performance some proved to have a stronger relationship than others (See Table 3).*

*It is important to remember that the relationships discussed in this section are correlational not causal. That is, two factors may occur at the same time but that does not necessarily mean that one has caused the other to happen. For example, a student with poor attendance may have low HSPT scores, however, that does not mean that his or her poor HSPT performance was caused solely or entirely by his or her poor attendance.

Table 3
Relationship of Family and School Factors to HSPT Results

	HSPT		
	Reading	Writing	Math
Family Situation[1]	No	No	No
Language at Home[1]	Yes	Yes	Yes
Classroom Behavior[1]	Yes	Yes	Yes
9th Grade Attendance[2]	Yes	No	Yes
Years in Perth Amboy[3] (not including 9th grade transfers from parochial schools)	Yes	Yes	Yes

1 according to t-tests
2 according to Pearson's correlation
3 according to anovas

The relationship between two variables -- consecutive years in the Perth Amboy district and attendance -- and student HSPT results was not clear cut.

The entire sample of 315 students can be broken down by the number of years enrolled in the district using the following categories: students enrolled from K through 9th, students who entered the district between 1st and 4th grade and stayed through 9th, students who entered or re-entered between 5th and 8th and stayed through 9th, and those who entered or re-entered the district in 9th grade. Initially, using these divisions there appears to be no significant relationship between the number of years the student spent in the district and HSPT performance.

However, over one third of the students in the sample entered in the 9th grade and the vast majority (75%) of these students transfered from the parochial school system. When those parochial school students who

transfered into Perth Amboy High School in 9th grade were eliminated from the sample, a significant relationship was revealed between the number of years a student has been in Perth Amboy and their performance on the reading, mathematics, and writing sections of the HSPT. Students who had been in the district longer did better on the HSPT.

There was little difference in the mean scores of those students who entered in kindergarten and those who entered between the first and fourth grades and stayed through 9th grade. That is, students who enter Perth Amboy by fourth grade do better on the HSPT than those who entered sometime after fourth grade, excluding those from parochial schools (see Table 4).

Table 4
HSPT Mean Scores by Family and School Factors

	HSPT Mean Scores		
	Reading	Writing	Math
Family Situation			
Two Parents	77.2	76.7	62.7
Other	75.3	75.1	61.5
Language at Home			
No English	67.4	70.6	54.5
Some English	79.4	78.3	64.9
Classroom Behavior			
Good	79.4	78.5	68.9
Poor	72.3	74.3	55.9
Years in Perth Amboy			
K-9	77.3	77.9	62.8
1,4-9	77.8	77.6	61.9
5,8-9	72.6	73.2	61.3
9th only (w/o parochial)	67.1	68.3	55.4
9th only (parochial)	83.2	78.6	65.4
Re-entrants	67.3	69.1	55.5

The mean scores were five to ten points lower on all sections of the HSPT for students who entered the district after fourth grade compared to those who enrolled prior to fourth grade. This difference was particularly dramatic (10 points) when comparing students who had been in Perth Amboy from K-9th grade to students who entered in 9th (excluding those from parochial schools). Most of those transferring into 9th (excluding the parochial school students) were re-entrants coming from out of the county.

The re-entrants composed 6 percent of the total sample. They were those students who had been enrolled in the district, left for at least one year and then re-entered. In most cases, they went out of the country. Their mean scores on the HSPT were particularly low, falling well below the score of students who had been in the district from kindergarden through 9th grade.

There is also a difference in the performance on HSPT between the students who transfered into the system in 9th grade from parochial schools and all other students in the sample. The parochial school students' mean scores on the HSPT were from three to nine points higher compared to all other students who entered Perth Amboy after 4th grade. Compared to the students who had been enrolled in Perth Amboy prior to 4th grade, the parochial students still had slightly higher mean scores (two points higher in math, six points in reading, and less than one point in writing).

There is also not an easily defined relationship between attendance and HSPT performance. Average attendance during the students' total years of enrollment in Perth Amboy did not seem to be related to their HSPT results. However, attendance in just the 9th grade was related to HSPT performance on the math and reading sections of the test. Those students with better

attendance in high school were likely to do better on these two sections of the HSPT than those with poor attendance. That relationship, while statistically significant, was not very strong. Overall, it is uncertain how great an impact attendance has on HSPT performance although one would think, intuitively, those students who spend more time in school should be better prepared to pass the test. One conclusion that could be drawn from the low correlation between attendance and HSPT performance is that the curriculum is not properly aligned with the HSPT. The district is currently realigning its curriculum for all grade levels, however the effects of this reorganization could not be observed on the 1986 HSPT results. Beginning with the 1987-88 school year the realignment will be complete.

Classroom behavior is related to HSPT performance. Students with better behavior records had a higher incidence of passing the HSPT than those students with poor behavior.* The students with good behavior had mean scores from four to thirteen points above the mean scores of students with poor behavior.

The language spoken in the home also had an impact. Students from homes where at least some English is spoken did significantly better on all three sections of the HSPT than students from households where no English is spoken. The mean scores of students from English speaking households were eight to ten points higher on each section of the HSPT than the mean scores of those from non-English speaking homes.

Family situation, however, did not seem to make any difference at all in student's performance on the HSPT. Students from one parent households scored as high on the HSPT as students from two parent households.

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*Good behavior was defined as students having from zero to two I's on the behavior grid and poor behavior three to eight I's. There were too few students with U's to be able to use that rating for comparison purposes.

Findings and Recommendations

The data suggest that of the five hypothesized factors, four (number of years in the district, behavior, home language and attendance) proved to have a statistically significant effect on student HSPT performance. Some of these variables the district can influence; others probably fall beyond the district's domain.

There are several areas where the district might be able to concentrate efforts in an attempt to improve test performance. The number of consecutive years the student has spent in Perth Amboy does have an effect on their test performance. Students who have been in the district from at least middle school to 9th grade do better on the HSPT than those who enter or re-enter sometime during or after middle school (excluding those from parochial schools). The district has a significant transient population but an effort to try to keep students in the Perth Amboy system could prove worthwhile for improving HSPT performance. In addition, students re-entering the district should be carefully screened to insure that they are being placed at the appropriate grade level.

Classroom behavior is another area to target. Students with better behavior in elementary schools perform better on the HSPT. Many researchers claim that when poor behavior is correlated with poor performance it is often a symptom of a deeper problem. Poor behavior is often linked to low teacher expectations, for example. This may indicate that students with poor behavior do not receive the same quality of instruction as students with good behavior.

High school attendance is a third area. The data suggest that there is a relationship between good attendance in high school and higher HSPT results. Making behavior and attendance priorities in the school may help raise HSPT scores. By having the students in the school more often and spending more time on task the students will be better prepared for the test.

While home language does not fall directly under the realm of school matters, it is an area that does have an impact on student's HSPT performance. The school should make it clear to parents who do speak English that speaking it at home will effect their child's performance positively. Joint school-community efforts to teach English to adults who are not proficient in English, such as recent immigrants, might also improve HSPT results in the long run.

The data also suggest that students from parochial schools who enter the Perth Amboy district in 9th grade do better on the HSPT than other students. These students seem to enter the district public schools better prepared, and thus they have higher mean scores especially in the areas of reading and writing. This could be attributed to a variety of factors but it is not within the scope of this study to speculate what they might be.

In summary, there are four areas where the Perth Amboy school district should focus its attention in an attempt to improve students' HSPT performance. First, students entering or re-entering the district at middle school level or later should be targeted for special remediation because these are the students whose performance is likely to be particularly low on the HSPT. Second, the district should investigate to what degree its curriculum is aligned with the HSPT. Related to this, is the issue of

students with poor behavior, the quality of instruction they receive and the expectation levels of their teachers. Finally, the district should reach out to the community and strongly encourage bilingual parents to speak at least some English at home since this can effect their child's school performance. In the case of non-English speaking parents, efforts should be made -- in cooperation with the community -- to provide instruction in English for these adults. For the most part these recommendations can be implemented without much additional cost. With a refocusing of its attention and resources the district could begin to address some of the issues that appear to be effecting students' HSPT performance.